

Title (en)
Pierce gun and method of controlling thereof

Title (de)
Pierce-Strahlerzeuger und Steuerverfahren dafür

Title (fr)
Canon de Pierce et son procédé de commande

Publication
EP 2373129 A2 20111005 (EN)

Application
EP 11159674 A 20110324

Priority
US 75084110 A 20100331

Abstract (en)
A system and method for controlling the temperature of both an electron emitter (20) and a filament (22) to their lowest possible operating temperature is disclosed. The apparatus (10) includes a filament (22), an electron emitter (20) heated by the filament (22) to generate an electron beam (14), and a power supply (26) configured to supply power to each of the filament (22) and the electron emitter (20). The apparatus also includes a control system (34) to control a supply of power to each of the filament (22) and the electron emitter (20), with the control system (34) being configured to receive an input indicative of a desired electron emitter operating temperature, cause a desired voltage to be applied between the electron emitter (20) and the filament (22), and cause a desired voltage to be applied to the filament (22) based on the desired emitter element operating temperature, so as to minimize an operating temperature of the electron emitter (20) and the filament (22).

IPC 8 full level
H05G 1/34 (2006.01)

CPC (source: EP US)
H01J 35/045 (2013.01 - EP US); **H05G 1/32** (2013.01 - EP US)

Citation (applicant)
US 3882339 A 19750506 - RATE JR EDWARD T, et al

Cited by
CN105813827A

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EP 2373129 A2 20111005; **EP 2373129 A3 20120118**; JP 2011216481 A 20111027; JP 5753420 B2 20150722; US 2011241575 A1 20111006; US 8487534 B2 20130716

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